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Party to the Hearing  
Principal, California Water Research

**BEFORE THE  
CALIFORNIA STATE WATER RESOURCES CONTROL BOARD**

HEARING IN THE MATTER OF  
CALIFORNIA DEPARTMENT OF  
WATER RESOURCES AND UNITED  
STATES BUREAU OF  
RECLAMATION  
REQUEST FOR A CHANGE IN POINT  
OF DIVERSION FOR CALIFORNIA  
WATER FIX

MOTION TO INTRODUCE  
FOUNDATIONAL EVIDENCE INTO  
THE HEARING RECORD

**BACKGROUND ON FOUNDATIONAL EVIDENCE**

In most Board proceedings, evidence is only submitted by Protestants for direct testimony or rebuttal and thus there is no need for any procedure for Protestants to submit evidence prior to their scheduled testimony or rebuttal. However, in this hearing, there are significant foundational issues with the computer modelling and model results relied on by the Petitioners

1 for their Case in Chief. The Petitioners have also submitted expert testimony, which certifies the  
2 proposed use of the computer modelling and model results in the hearing. The testimony relies  
3 in part on peer reviews. However, the reports from the peer reviews were not submitted as  
4 exhibits by the Petitioners. I sent the reports to the Board on June 10, 2016, citing the omission  
5 and requesting that they be accepted into evidence, ‘for the purpose of objections.’

6 There is a second foundational issue in the hearing, in that the Petitioners have not arranged for  
7 adequate independent review of the modelling used for their Case in Chief. There also appears  
8 to be no accepted objective criteria for assessing the reliability of computer model results  
9 submitted for this proceeding, or even for assessing the adequacy of supporting information.

10 This issue is also foundational. The report of the Board’s 2012 scientific and technical expert  
11 panel on “Analytical Tools for Evaluating Water Supply, Hydrodynamic and Hydropower  
12 Effects” does provide such criteria. The criteria were determined by independent experts with  
13 significant experience with CalSim II and DSM2. Results from these two computer models are  
14 the foundation for the Petitioners’ Case in Chief. I submitted a letter with relevant excerpts in  
15 the report to the Board on June 20, 2016, together with a copy of the report, and requested that it  
16 be accepted into evidence “by Official Notice,” so that it could be used as a reference in  
17 consideration of these issues. The letter of submission was served on the Hearing parties.

18 While the letters and reports have been posted on the Hearing web page, there has been no ruling  
19 on these motions to introduce evidence into the hearing record, perhaps because it appeared  
20 sufficient to only accept information submitted by Protestants for direct testimony or rebuttal.  
21 However, there are statutory reasons why the technical information in these reports should be  
22 considered for acceptance into evidence before that time.  
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1 The APA does confer on each party the rights to call and examine witnesses, to cross-examine  
2 opposing witnesses, impeach any witnesses, introduce exhibits, and rebut evidence, (Govt Code  
3 11425.10(a), 11513 (b).) These rights would be affirmed by timely consideration of the motions  
4 to accept these scientific and technical documents for evidence in the hearing. Timely  
5 consideration will also allow use of the documents for cross-examination, under Evidence Code  
6 721(b)(2).

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8 **BACKGROUND ON FOUNDATIONAL TESTIMONY**

9 Armin Munevar’s Statement of Qualifications (Exhibit DWR-30) states that he has been the  
10 Integration Lead for the “application of physically based numerical and water management  
11 models” for the Bay Delta Conservation Plan since 2007. Mr. Munevar’s testimony that the  
12 CalSim II modelling is reliable (Exhibit DWR-71), is the foundation for admitting the model  
13 results into evidence. Mr. Munevar’s testimony refers to the following reports, and implicitly or  
14 explicitly relies on them for assertions about the reliability of the modelling: (1) The 2003 peer  
15 review of the CalSim model, sponsored by the Bay-Delta Authority, titled “A Strategic Review  
16 of CALSIM II and its Use for Water Planning, Management, and Operations in Central  
17 California;” and (2) the 2004 response to the peer review by DWR and USBR, titled, “PEER  
18 REVIEW RESPONSE: A Report by DWR/Reclamation in Reply to the Peer Review of the  
19 CalSim-II Model Sponsored by the CALFED Science Program in December 2003.” However,  
20 these documents were not submitted as exhibits.  
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1 In addition, the Petitioners' exhibit (DWR-507), CalSim II San Joaquin River Peer Review  
2 Response, 2007, refers to the following report, (3) "Review Panel Report San Joaquin River  
3 Valley CalSim II Model Review", which was also not submitted as an exhibit.

4 After the Petitioners submitted their exhibits, I saw that reports (1-3) were referenced but not  
5 included in the submission. I realized there was an issue of prejudice to the Protestants by this  
6 omission. For this reason, I submitted the omitted reports to the Board on June 10, 2016. I cited  
7 the omission, and requested that the reports be introduced into evidence, "for the purpose of  
8 objections." I served a copy of the letter of submission to the Hearing Parties. If there is  
9 consideration during the hearing of the reliability of the modelling evidence, prior to accepting  
10 this testimony, this motion will be in order for use of the documents in oral or written arguments.  
11 I respectfully request that it be considered.

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13 Given the above considerations, I also respectfully request the following.

- 14  
15 (1) That the reports I submitted to the Board on June 10, 2016, be accepted into evidence, per  
16 my request. The reports are as follows: (1) 2003 CalSim Strategic Review; (2) 2004  
17 CalSim Peer Review Response; (3) 2006 CalSim II peer review of the San Joaquin River  
18 module. The letter submitting the reports for acceptance into evidence was served on the  
19 Hearing Parties.
- 20 (2) That the Board act on the request I made on June 20, 2016, submitting report (4) from the  
21 2012 scientific and technical panel. The report is entitled "Analytical Tools for Evaluating  
22 Water Supply, Hydrodynamic and Hydropower Effects." It was submitted with a request  
23 that the Board take "Official Notice," and included excerpts from the report and points in  
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1 support of that request. The letter submitting report (4) for acceptance into evidence was  
2 served on the Hearing Parties. If report (4) is not accepted by “Official Notice,” I hereby  
3 request that it be considered for acceptance as an evidentiary submission.

4 (3) That the Board act on the request I made on July 12, 2016, submitting report (5) into  
5 evidence. That report is entitled “35th Annual Progress Report to the State Water  
6 Resources Control Board,” and was referenced in Mr. Munevar’s testimony and is therefore  
7 relevant to the hearing Chapter 2 on calibration of the DSM2 model is also relevant to  
8 testimony by Mr. Parviz Nader-Tehrani (Exhibit DWR-66.) The letter submitting this  
9 report for acceptance into evidence was served on the hearing parties.

10 (4) That the technical reference document I served to the Board and the Hearing Parties on July  
11 12, 2016, be accepted into evidence. The document, “Department of Defense Instruction  
12 5000.61 on Modeling and Simulation (M&S) Verification, Validation, and Accreditation  
13 (VV&A),” was served together with my brief. The issue of model verification, validation,  
14 and accreditation is foundational, and the DoD Instruction provides definitions based on  
15 commonly accepted modeling and simulation procurement practices.

#### 16 **PROCEDURAL ISSUES WITH ACCEPTANCE OF SUBMITTED DOCUMENTS**

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18 Since several of the reports enumerated above are documents of considerable size (3-14 MB),  
19 they were submitted directly to the Board with a request that they be introduced into evidence,  
20 together with a description of how the documents were obtained. The letters of submission  
21 were served on the Hearing Parties. This has been the designated procedure for submission of  
22 evidence by the Petitioners, and by the Parties for testimony and rebuttal. If this method of  
23 service is not acceptable for Protestants at this stage of the hearing for some reason, I request that  
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1 the Board allow me the chance to serve the documents directly on the Hearing parties after such  
2 a ruling.

3 **LACK OF PRELIMINARY HEARING ON FOUNDATIONAL ISSUES**

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5 **WITH RESPECT TO MODELLING**

6 After Petitioners requested a 60 day delay to prepare their Case in Chief, South Delta Water  
7 Agency requested a pre-hearing workshop, citing in part the need to comment on or brief the  
8 foundational issues regarding the computer modelling evidence. The Board declined to hold a  
9 pre-hearing workshop, and the Hearing Officer ruled that the hearing would proceed per the  
10 revised schedule. The only scheduled opportunity for Protestants to present argument on the  
11 foundational issues, prior to findings being made on these issues, was through objections or  
12 motions to exclude. This schedule did not address the due process issues of considering  
13 foundational testimony and cross-examination of the engineers who are certifying the reliability  
14 of the modelling, and accepting comments or briefs on the certification, prior to making a  
15 decision. The testimony of Jennifer Pierre, which describes the choice of modelling scenarios  
16 and model runs that are presented as exhibits by the Petitioners, and the rationale behind those  
17 choices, is also foundational. Issues with the sufficiency of the set of scenarios are foundational.  
18 If this foundational testimony is not excluded on prima facie considerations, I respectfully  
19 request that the Board consider designating a preliminary part of the hearing to hear the  
20 testimony on choice of model runs and scenarios, and on certification of the models as reliable,  
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1 and receive comments or briefs on the foundational facts that are presented, prior to making any  
2 findings based on this testimony.<sup>1</sup>

### 3 **BRIEF ON ISSUES WITH FOUNDATIONAL TESTIMONY**

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5 I wrote and submitted a brief on July 12, 2016, "Evaluation of Testimony on Reliability of the  
6 Modelling," which documents and explains the contradictions between the testimony and the  
7 Peer Review reports. Some of the contradictions were referenced in objections; however, the  
8 Board did not have any detailed technical brief available, which may be required for adequate  
9 understanding of the issues. The brief was served to the Hearing Parties to provide a brief of  
10 these technical issues. I respectfully request that the brief be considered after modelling  
11 certification testimony by the engineers, and prior to findings being made that rely on the  
12 testimony.

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14 The brief contains excerpts from the documents (1-5), enumerated above. At the time of  
15 submission, there had been no action on my motions to submit documents 1-4 into evidence. As  
16 indicated above, document (5) was also submitted to the Board on June 20, 2016, with a request  
17 that it be accepted into evidence, and the request was served on the hearing parties. A sixth  
18 document, providing definitions of engineering terms commonly used in procurement of large  
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22 <sup>1</sup> In the recent case of *Sargon Enterprises, Inc., v. University of Southern California*, the trial court held an eight day  
23 hearing on whether to exclude foundational evidence and expert testimony on considerations of reliability under  
24 Evidence Code 801 and 802. The trial court then issued a 33 page written opinion excluding the evidence. The  
25 Supreme Court upheld the decision. See the California Bar Journal Article, "Supreme Court clarifies role of trial  
26 judge in determining admissibility of expert testimony," available at  
27 [http://apps.calbar.ca.gov/mcleselfstudy/mcle\\_home.aspx?testID=69](http://apps.calbar.ca.gov/mcleselfstudy/mcle_home.aspx?testID=69). The foundational evidence in this hearing is  
much more complex and technical than in *Sargon*, and the hearing is governed by Evidence Code 801 and 802.

1 models and simulations, was served on the parties together with the brief, and I have requested  
2 that it be accepted into evidence.

3 Absent a ruling by the Board on my requests to submit documents (1-4) into evidence, it was  
4 unclear how to submit large documents into evidence for reference in the brief. As a result, I  
5 cited the June 10, 2016 and June 20, 2016 submissions and the fact that the documents were  
6 posted on the Hearing website. I also submitted document (5) to the Board, and requested that it  
7 be accepted into evidence. I hereby request that the Board make a timely decision on my motion  
8 to accept documents (1-6) into evidence, and if they are not accepted, allow me the remedy of  
9 serving the documents directly to the Hearing Parties via the service list, and amend the  
10 incorporation of the documents in the brief.  
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### 12 **CONCLUSION**

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14 Due process requires timely and adequate examination of any issues of foundational testimony,  
15 prior to any reliance on it for any decision. The foundational issues in this testimony are  
16 complex and highly technical. As explained above, I believe that examining them properly  
17 requires reference to peer review reports, recommended guidelines on use of model results in  
18 Board proceedings, and definition of some engineering terms. I respectfully request that the  
19 Board consider the above motions to accept these documents into evidence, prior to the hearing.  
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**STATEMENT OF SERVICE**

**CALIFORNIA WATERFIX PETITION HEARING**  
**Department of Water Resources and U.S. Bureau of Reclamation (Petitioners)**

I hereby certify that I have this day submitted to the State Water Resources Control Board and caused a true and correct copy of the following document(s):

**Motion to Introduce Foundational Evidence Into Hearing Record**

to be served **by Electronic Mail** (email) upon the parties listed in Table 1 of the **Current Service List** for the California WaterFix Petition Hearing, dated July 15, 2016, posted by the State Water Resources Control Board at [http://www.waterboards.ca.gov/waterrights/water\\_issues/programs/bay\\_delta/california\\_waterfix/service\\_list.shtml](http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/service_list.shtml)

I certify that the foregoing is true and correct and that this document was executed on July 19, 2016.

Signature:



Name: Deirdre Des Jardins  
Title: Principal, California Water Research

Party/Affiliation:  
Deirdre Des Jardins

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